# CLAIMS

1. A method for power control in a communication system (100) including a transceiver node (122) capable of communicating with multiple mobile terminals (110), comprising the steps of:

receiving, at the transceiver node, a transmitter power change request from one of the mobile terminals over a wireless connection;

determining, at the transceiver node, at least one power control parameter for the connection based on a current total transmitter power of the transceiver node; and

distributing transmitter power to the connection in accordance with the determined power control parameter.

2. The method of claim 1, wherein the current total transmitter power represents substantially all downlink power resources, common and connection-specific, used at the transceiver node (122) at a particular point of time.

3. The method of claim 1, further comprising the step of measuring the current total transmitter power at the transceiver node (122).

4. The method of claim 1, wherein the determining step is further based on a current connection-specific transmitter power for the connection.

5. The method of claim 4, wherein the total transmitter power is a downlink carrier power and the connection-specific transmitter power is a downlink code power.

6. The method of claim 1, wherein the determining step is further based on connection-specific information indicating the degree of priority associated with the connection.

7. The method of claim 6, wherein the connection-specific information comprises information selected from the group of: mobile type, mobile class, subscription class, connection time, transmitted data amount, data amount in buffer, packet length, packet type, time since last packet, block error statistics, and block retransmission statistics.

8. The method of claim 1, wherein the power control parameter is related to a maximum value of the connection-specific transmitter power.

9. The method of claim 1, wherein the power control parameter is directly or indirectly related to a power change rate of the connection-specific transmitter power.

10. The method of claim 9, wherein the power control parameter is related to a probability of grant.

11. The method of claim 9, wherein the power control parameter is related to a power change step size.

12. The method of claim 1, comprising the steps of

combining, at the transceiver node (122), at least two power control parameters based on different input parameters into an aggregate power control parameter; and

using the aggregate power control parameter for distributing the connection-specific transmitter power in the distributing step.

13. The method of claim 1, wherein the determining step involves executing a predetermined power control function presenting a smooth transitional behavior as the current total transmitter power of the transceiver node (122) approaches a maximum total transmitter power value.

14. The method of claim 1, wherein the determining step involves deciding the power control parameter based on a predetermined threshold value for the total transmitter power.

15. The method of claim 1, wherein the determining step is based on current and previous values of the total transmitter power.

16. A transceiver node (122) capable of communicating with multiple mobile terminals (110) in a communication system (100) with means for power control, comprising

means for receiving a transmitter power change request from one of the mobile terminals over a wireless connection;

means for determining at least one power control parameter for the connection based on a current total transmitter power of the transceiver node; and

means for distributing transmitter power to the connection in accordance with the determined power control parameter.

17. The transceiver node of claim 16, wherein the current total transmitter power represents substantially all downlink power resources, common and connection-specific, used at the transceiver node (122) at a particular point of time.

18. The transceiver node of claim 16, further comprising means for determining the power control parameter based on a current connection-specific transmitter power for the connection.

19. The transceiver node of claim 18, further comprising means for measuring the total transmitter power and the connection-specific transmitter power.

20. The transceiver node of claim 16, further comprising means for determining the power control parameter based on connection-specific information indicating the degree of priority associated with the connection.

21. The transceiver node of claim 16, wherein the power control parameter is related to an item selected from the group of a maximum value of the connection-specific transmitter power, a probability of grant, and a power change step size.

22. The transceiver node of claim 16, comprising

means for combining at least two power control parameters based on different input parameters into an aggregate power control parameter; and

means for using the aggregate power control parameter for adjustments of connection-specific transmitter power.

23. The transceiver node of claim 16, wherein the means for determining involves means for executing a predetermined power distribution function presenting a smooth transitional behavior as the current total transmitter power of the transceiver node (122) approaches a maximum total transmitter power value.

24. The transceiver node of claim 16, wherein the means for determining involves means for deciding the power control parameter based on a predetermined threshold value for the total transmitter power.

25. The transceiver node of claim 16, comprising a base station unit.

26. A communication system (100) provided with means for power control and including a transceiver node (122) capable of communicating with multiple mobile terminals (110), comprising

means for receiving, at the transceiver node, a transmitter power change request from one of the mobile terminals over a wireless connection;

means for determining at least one power control parameter for the connection based on a current total transmitter power of the transceiver node; and

means for distributing transmitter power to the connection in accordance with the determined power control parameter.

27. The communication system of claim 26, wherein the current total transmitter power represents substantially all downlink power resources, common and connection-specific, used at the transceiver node (122) at a particular point of time.

28. The communication system of claim 26, further comprising means for determining the power control parameter based on a current connection-specific transmitter power for the connection.

29. The communication system of claim 26, further comprising means for determining the power control parameter based on connection-specific information indicating the degree of priority associated with the connection.

30. The communication system of claim 29, further comprising means for transmitting the connection-specific information from a network-based control unit (124) of the communication system to the transceiver node (122).

31. The communication system of claim 26, wherein the power control parameter is related to an item selected from the group of a maximum value of the connection-specific transmitter power, a probability of grant, and a power change step size.

32. The communication system of claim 26, being selected from the group of: a Code Division Multiple Access (CDMA) system, a Wideband Code Division Multiple Access (WCDMA) system, an Orthogonal Frequency

Division Multiplexing (OFDM) system, and a system using Multi Carrier Power Amplifiers (MCPA).

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